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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,149	09/24/2003	Joseph Phillip Bigus	YOR920030271US1	7384

35526 7590 03/02/2009

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ART UNIT	PAPER NUMBER
2129	

NOTIFICATION DATE	DELIVERY MODE
03/02/2009	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOSEPH PHILIP BIGUS and DONALD ALLEN SCHLOSNAGLE

Appeal 2008-2741
Application 10/670,149
Technology Center 2100

Decided:[1] February 26, 2009

Before LANCE LEONARD BARRY, JAY P. LUCAS, and THU A. DANG, *Administrative Patent Judges.*

DANG, *Administrative Patent Judge.*

DECISION ON APPEAL

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[1] The two month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

I. STATEMENT OF CASE

Appellants appeal the Examiner's final rejection of claims 1-5, 7-13, 15-21, and 23-27 under 35 U.S.C. § 134(a)(2002). Claims 6, 14, and 22 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b)(2002).

A. INVENTION

According to Appellants, the invention relates to determining the status of a computing system and software applications running on that system (Spec., Abstract).

B. ILLUSTRATIVE CLAIM

Claim 1 is exemplary and is reproduced below:

1. A computer-implemented method of determining a health of a computing system component, the computer-implemented method comprising:

generating at least one fuzzy data set associated with at least one measured metric of the computing system component, wherein the fuzzy data set defines fuzzy regions indicating different categories of the measured metric;

generating at least one fuzzy rule set associated with the at least one measure metric, wherein the fuzzy rule set defines a relationship of the fuzzy regions of the fuzzy data set to categories of computing system component health; and

outputting the health of the computing system component based on the at least one fuzzy data set and the at least one fuzzy rule set.

C. REJECTIONS

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Arnold	US 5,822,301	Oct. 13, 1998

Bigus, *Applying Neural Networks to Computer System Performance Tuning*, IEEE, (1994).

Claims 1-5, 7-13, 15-21, 23, and 24 stand rejected under 35 U.S.C. § 102(b) over the teachings of Arnold; and

Claims 25-27 stand rejected under 35 U.S.C. § 103(a) over the teachings of Arnold and Bigus.

We affirm.

II. ISSUES

The issues are whether Appellants have shown that the Examiner erred in finding that: 1) Arnold discloses "generating at least one fuzzy data set associated with at least one measured metric of the computing system component," and "outputting the health of the computing system component" (Claim 1); 2) Arnold discloses "at least one fuzzy rule set includes at least one hedge" and "applying at least one hedge algorithm associated with the at least one hedge to the metric data" (Claim 8); and 3) it would have been obvious to combine the teachings of Arnold and Bigus.

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Appellants' Invention

1. Appellants disclose determining the status of a computer system and software applications running on that system (Abstract).

Arnold

2. Arnold discloses evaluating multi-part communication connections between two parties to a communication in a multi-mode network (col. 2, ll. 61-65).
3. Measured values to be acquired are determined for node dependability (col. 3, ll. 22-27).
4. The measured values are processed with fuzzy logic in that at least one fuzzy rule set is employed for each of the evaluation categories (col. 3, ll. 29-46).
5. Metric parameters that describe aspects of the communication connection can be utilized in the evaluation of the connection. Measured quantities are acquired in the determination of the measured parameters, that is, the routing metrics for the individual categories, since statement about the conditions of the network is made (col. 3, l. 66 to col. 4, l. 14).

IV. PRINCIPLES OF LAW

35 U.S.C. § 102

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharm.Corp.*, 432 F.3d 1368, 1375-76 (Fed. Cir. 2005) (citation omitted). "Anticipation of a patent claim requires a finding that the claim at issue 'reads on' a prior art reference." *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346 (Fed Cir. 1999) ("In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.") (citations omitted).

The *claims* measure the invention. *See SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). "[T]he PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)).

35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of

obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). "[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability." *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore,

> "'there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness' . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ."

KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

V. ANALYSIS

35 U.S.C. § 102

Claims 1-5, 7, 9-13, 15, 17-21, and 23

Appellants do not provide separate arguments with respect to the rejection of claims 1-5, 7, 9-13, 15, 17-21, and 23. Therefore, we select independent claim 1 as being representative of the cited claims. 37 C.F.R. § 41.37(c)(1)(vii).

In the Appeal Brief, Appellants argue that Arnold does not disclose "generating at least one fuzzy data set associated with at least one measured

metric of *the computing system component,*" or "outputting the health of the *computing system component*" (App. Br. 12) because "a communication connection as in *Arnold* is not the same as a computing system" (App. Br. 13). However, the Examiner finds "the communication connections in communication network of Arnold to read on a computing system component" (Ans. 12), and "'a reliable statement [in Arnold] about the respective condition of the network' to read on 'the health of a computing system'" (Ans. 13). Thus, the issue that we address on appeal is whether Arnold discloses "generating at least one fuzzy data set associated with at least one measured metric of the computing system component," and "outputting the health of the computing system component" (claim 1).

We begin our analysis by giving the claims their broadest reasonable interpretation. *See In re Bigio* at 1324. Furthermore, our analysis will not read limitations into the claims from the specification. *See In re Van Geuns* at 1184. It is the Appellants' burden to precisely define the invention. *See In re Morris* 127 F.3d 1048, 1056 (Fed. Cir. 1997). Appellants' claims simply do not place any limitation on what "component" in "computing system component" or "health" means, includes or represents, other than that the health of the computing system component is determined.

We thus give "component" its ordinary meaning of "an entity making up a whole" and therefore we find "computing system component" to be any entity that makes up a computing system. Similarly, we give "health" its ordinary meaning of "condition" or "status," and thus, "health of a

computing system component" to be "condition or status of an entity in the computing system." In fact, Appellants' own invention is directed to "determining the status of a computer system" (FF 1).

We note that a "system" comprising a plurality of computers connected to a network could be considered a "component" of a bigger computing system comprising a plurality of smaller systems. That is, such smaller system along with other smaller systems could make up the entire bigger system. As the Examiner finds, "the communication networks are complex systems that contain several thousand components" (Ans. 12).

We generally agree with the Examiner's finding that Arnold discloses the claimed elements on appeal beginning at page 4 of the Answer, and including the Examiner's corresponding responsive arguments beginning at page 10 of the Answer. In the Examiner Answer, the Examiner finds, "'a reliable statement about the respective condition of the network' to read on the health of a computing system [component]" (Ans. 13).

Arnold discloses generating fuzzy data set and generating fuzzy rule set (FF 4) for evaluating network condition (FF 2) and determining conditions of the network (FF 5), wherein such condition determination includes determining node dependability (FF 3). We find that such determining step for determining the condition (or status) of the network including the nodes of the network to read upon determining the health of a system component. That is, we find that a "computing system component" could include the network, the subnetwork, or nodes within the network or

subnetwork. An artisan would have understood the step of determining the condition or status of the network including determining node dependability to be a determining step for determining the condition of the node/component.

Therefore, we agree with the Examiner that Arnold discloses "generating at least one fuzzy data set associated with at least one measured metric of the computing system component," and "outputting the health of the computing system component" as claimed (claim 1). That is, we find Arnold's teaching of determining the condition or status of the network to read on Appellants' own invention directed to "determining the status of a computer system" (FF 1).

Though Appellants also argue that "[a] network simply is not a device as in claim 1" (App. Br. 14), such argument is not commensurate with claim 1. That is, "device" is not claimed by the Appellants in claim 1.

Accordingly, we conclude that the Appellants have not shown that the Examiner erred in rejecting independent claim 1, and claims 2-5, 7, 9-13, 15, 17-21, and 23 falling with claim 1, under 35 U.S.C. § 102(e).

Claims 8, 16, and 24

Appellants also argue that Arnold differs from the claimed invention because "Arnold does not teach the feature 'wherein the at least one fuzzy rule set *includes at least one hedge*'" as recited in claim 8 (App. Br. 17). However, the Examiner finds that Arnold discloses such feature (Ans. 16-

17). Thus, the issue that we address on appeal is whether Arnold discloses "at least one fuzzy rule set includes one hedge" and "applying at least one hedge algorithm associated with the at least one hedge" (claim 8).

We begin our analysis by giving the claims their broadest reasonable interpretation since Appellants' claims simply do not place any limitation on what "hedge" represents, other than that the hedge algorithm is applied.

We agree with the Examiner's finding that Arnold discloses the claimed elements on appeal beginning at page 6 of the Answer, and including the Examiner's corresponding responsive arguments beginning at page 16 of the Answer. As the Examiner finds, in Arnold, "the formulation of the rules is a heuristic... evaluated" (Ans. 17).

We agree with the Examiner that such a heuristic scheme includes an "algorithm" that is applied and that is associated with portions of the fuzzy rule set, including the hedge in the fuzzy rule set. We thus agree with the Examiner that Arnold discloses "at least one fuzzy rule set includes one hedge" and "applying at least one hedge algorithm associated with the at least one hedge to the metric data" (Claim 8).

Accordingly, we conclude that the Appellants have not shown that the Examiner erred in rejecting independent claims 8, 14, and 22 under 35 U.S.C. § 102(e).

35 U.S.C. § 103(a)

Claims 25-27

As to claims 25-27, Appellants add the argument that "*Bigus* does not overcome the deficiencies of *Arnold*" (App. Br. 19), and that "the Examiner has not actually stated a teaching or suggestion based on the references to combine the references" (App. Br. 20).

As discussed above, we do not find any deficiencies in Arnold. Further, to address the issue of whether Appellants have shown there is error in the Examiner's finding that it would have been obvious to combine the teachings of Arnold and Bigus, we must determine whether or not the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR*, 127 S. Ct. at 1734. Obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case, and the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not. *See Leapfrog*, 485 F.3d 1157, 1161 (Fed. Cir. 2007). That is, the test for obviousness is rather what the combined teachings of the references would have suggested to those of ordinary skill in the art. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991).

As the Examiner finds "both Arnold and Bigus are directed to computing system and using measured metrics to evaluate its performance" (Ans. 22). We find that combining the teachings "to maximize system efficiency" as found by the Examiner (Ans. 9) would require no more than "ordinary skill and common sense" (*KSR*, 127 S. Ct. at 1742). Appellants have presented no evidence that adding the teaching of "using key system performance measures of Bigus" (*id.*) to the "health of a computing system component of Arnold" (*id.*) "was uniquely challenging or difficult for one of ordinary skill in the art," nor have Appellants presented evidence that this "represented an unobvious step over the prior art." *See Leapfrog*, 485 F.3d at 1162.

A person of ordinary skill will be able to fit the teachings of Arnold and Bigus together like pieces of a puzzle since the "person of ordinary skill is also a person of ordinary creativity, not an automaton." *See KSR*, 127 S. Ct. at 1742. The person of ordinary skill and common sense would find it obvious to combine the teachings "to maximize system efficiency" as found by the Examiner (Ans. 9). Appellants have not presented any evidence to indicate why it would not have been obvious to combine the references. Thus, we find that Appellants have not met the burden on appeal to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d at 985-86.

Accordingly, we conclude that the Appellants have not shown that the Examiner erred in rejecting independent claims 25-27 under 35 U.S.C. § 103(a).

VI. CONCLUSIONS OF LAW

(1) Appellants have not shown that the Examiner erred in finding that claims 1-5, 7-13, 15-21, and 23-24 are anticipated the teachings of Arnold.

(2) Appellants have not shown that the Examiner erred in finding that claims 25-27 are unpatentable over the teachings of Arnold in view of Bigus.

(3) Claims 1-5, 7-13, 15-21, and 23-27 are not patentable.

VII. DECISION

The Examiner's decision rejecting claims 1-5, 7-13, 15-21, and 23-24 under 35 U.S.C. § 102(b) and claims 25-27 under 35 U.S.C. § 103(a) is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

rwk

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